

REMARKS

In the Final Office Action mailed February 20, 2008, the Examiner rejected all the claims on two grounds: (1) under 35 U.S.C. §112, some under the first paragraph, and others under the second paragraph; and (2) under 35 U.S.C. §103(a) as being unpatentable over Divelbiss et al (US Patent Application Publication No. 2001/0028416) in view of ColorLink Inc. ColorSelect™ web page. In connection with the §103(a) rejection, the Examiner held that it would have been obvious to substitute elements of the ColorSelect publication for certain elements in the Divelbiss published patent application.

The foregoing amendments cancel most of the claims rejected by the Examiner under 35 U.S.C. §112, first paragraph; traverse the rejection of other claims under 35 U.S.C. §112, second paragraph; and traverse the rejection under 35 U.S.C. §103. In support of the latter, there is also enclosed a Declaration by the Inventor, an expert in this field, clearly showing that the substitution proposed by the Examiner would not only be unobvious, but would also result in an inoperable system to perform its intended function.

Favorable reconsideration of the application is therefore respectfully requested in the light of the amendments, remarks and declaration, as more particularly discussed below.

Re: The Rejection under 35 U.S.C. §112, first paragraph

This rejection was applied against Claims 43, 44, 47–54, and 57–60, on the grounds that many expressions set forth in these claims did not find clear explicit description in the specification.

Applicant feels that, while the Examiner is correct that many expressions in these claims do not find explicit description in the specification, the terminology used in the claims is clearly and non–ambiguously implicit in the description in the specification. Thus, the specification clearly described the overall novel concept, and an example of novel concept wherein each of the optical polarization rectifiers contains a stack of optical retarders that rotate the polarization of the green component, while the leaving the polarization state of the red and blue components intact (as set forth in Claim 45), and wherein the color components in the output of each projector are linearly polarized (as set forth in Claim 42). However, it is clearly obvious, and non–ambiguously implicit, that

the opposite could apply, namely that the polarization rectifiers could rotate the polarization states of the red and blue components, while leaving the green component intact, and that the color components in the output of each projector could be circularly polarized. Accordingly, the terminology used in the claims rejected on this ground merely renders explicit that which was clearly and non-ambiguously implicit in the description, and therefore constitutes neither new matter nor insufficient support for these rejected claims.

Nevertheless, to avoid this question altogether, the claims rejected on this ground as set forth in paragraph 3 of the Final Office Action have been deleted, thereby rendering the question moot with respect to those claims.

In section 4 of the Final Office Action, the Examiner also rejected independent Claim 40, and the remaining Claims 41–60 dependent on Claim 40, as failing to comply with the enabling requirement of 35 U.S.C. §112, first paragraph. In this rejection, the Examiner held the limitation, that the polarization rectifier be made exclusively of optical retarders, was not enabled by the specification since the polarization rectifiers described in the specification used a “polarizing film in addition to the stack of retarders” (section 4, second last line). In this respect, the Examiner also referred to the passage illustrated in Fig. 15 of the drawings showing a “clean-up polarizer film applied to the green rotating filter and half-wavelength retarder”.

However, it will be noted that in Fig. 12 of the drawings, the two blocks identified as a “Polarization Rectifier” are separate and distinct from their respective succeeding blocks each identified as a “Polarization Clean-up Filter”. The elements included in each block identified as “Polarization Rectifier” are exclusively retarders as described in the specification, since the addition of conventional polarizers would remove a substantial portion of the light, by absorption or reflection, thereby substantially decreasing the light output, which is exactly what the present invention avoids. The polarization clean-up filters are additional elements which are used for increasing the polarization ratio of each polarization retarder, as expressly set forth in claim 48.

In this rejection, the Examiner also refers to the Sharp U.S. Patent No. 6,310,673 which uses “a single polarizing film followed by a stack of two or more retarders.” However, Sharp had in mind a completely different use from that of the present

application, namely one in which the retarder is always used with a polarizer. Therefore, he called this technology “polarizer–retarder–stack”, or in short “PRS” (line 60, etc., Page 2). This is to be sharply distinguished from the “polarization rectifier” of Fig. 12 in the present application which uses retarders for polarizing the beam, followed by “polarizing clean-up filters” for increasing the polarization ratio of the output beams.

Applicant accordingly submits that it is clearly appropriate to refer to the “polarization rectifier” of applicant’s invention, as indicated by a block in Fig. 12, as constituted exclusively of optical retarders, as set forth in Claim 40, particularly since Claim 40 separately recites the polarization clean-up filters.

This is further supported by the fact that Claim 40 further recites “polarizing clean-up filters arranged for increasing the polarization ratio of the output beams”, as separate and distinct elements from the “polarization rectifiers”.

Re: Rejection under 35 U.S.C. §112, second paragraph

This rejection was applied against Claim 42 on the grounds that the recitation “the said color components are linearly polarized” is indefinite because one skilled in the art could not determine at which point they are linearly polarized. It is to be pointed out, however, that Claim 40 uses the term “color components” with respect to the output of each of the projectors (first full paragraph), and therefore it is believed that Claim 42 as originally presented is clear and definite and meets the requirements of 35 U.S.C. §112, second paragraph.

Nevertheless, to avoid this question altogether, Claim 42 has been amended to explicitly set forth that the “color components” referred to in Claim 42, are those in the output of each projector. It is submitted, therefore, that amended Claim 42 now clearly avoids this ground of rejection.

The same rejection was applied to Claim 47, but since Claim 47 has been deleted, the question is rendered moot with respect to Claim 47.

Re: The Rejection under 35 U.S.C. §103

In this rejection, as appearing at the bottom of Page 5, the Examiner quoted 35 U.S.C. §103(a), and rejected all the claims, namely Claims 40–60, under

35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication No. 2001/0028416 (Divelbiss) in view of the ColorSelect™ publication. In support of this rejection, the Examiner held (Page 8, last paragraph):

“The prior art, *Divelbiss* E1 as modified by *Divelbiss* E2, discloses a base device which differs from the claimed device by the substitution of some components, two linear polarizers, with other components, two rectifiers using exclusively retarders and one or two ½-wave retarders. As described above the substituted components and their functions were known in the art. At the time of invention, it would have been obvious to a person of ordinary skill in the art to make these substitutions, the results of which would have been predictable. The suggestion/motivation would have been to provide advantages such as to provide high light efficiency (see for example *ColorSelect* page 1).”

The propriety of holding whether or not a combination of references would be “obvious” under 35 U.S.C. §103(a) has been dealt with in a large number of prior decisions. See, for example, National Tractor Pullers Assn., Inc. v. Watkins 205 USPQ 892 wherein the Court stated (on Page 911):

“The test of obviousness under 35 U.S.C. 103 is not whether a prior art device could be modified into something resembling the applicant’s structure, but the proper test is whether, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art, given the teachings of the prior art, to make the invention. Graham v. John Deere, 383 US 1.148 USPQ 459 (1965). In considering the prior art, prior patents are references only for what they clearly disclose or suggest and it is not proper to modify their structure in a manner which is not suggested by prior art. In re Randol and Redford, 425 F.2d 1286, 165 USPQ 586 (CCPA 1970). A modification of a prior art patent or device which would render that device unworkable for its intended purpose cannot be said to suggest such a modification. Diamond International Corp. v. Walterhoefer, 289 Fig. Supp. 550, 159 USPQ 452 (D.C. Md. 1968); Ex parte Weber, 154 USPQ 491 (P.O.Bd.Ap. 1967). (Underlining added.)

As will be shown below, and particularly in the attached declaration by the inventor, the combination of references suggested by the Examiner does not meet this test of obviousness, particularly the last sentence of this test.

As brought out in the attached declaration by the inventor, an expert in the field, the ColorSelect™ filter is intended for use as a component internal to a projector, i.e. before the projection lens shown in the Fig. 2 illustration of the prior art. In such a use, the ColorSelect™ filter is part of the projector, as distinguished from a “projector display system” involved in the present application.

The two applications are quite distinct from each other, each involving its own problems and its own solutions.

Moreover, as further shown by the accompanying declaration, the substitution proposed by the Examiner would not only result in a different system from that of the present invention, as defined in Claim 40, but more importantly, would render the system of the primary reference inoperable to perform its intended function.

Thus, the accompanying declaration clearly shows that the general system described in the primary reference, namely E1 as modified by E2, is generally shown in Fig. 6 of the present application. The accompanying declaration further shows what would be produced by the replacement of the polarization transformers in such a system by a ColorSelect™ filter as suggested by the Examiner. However, the accompanying declaration further shows that such a modification of the primary reference would result in a system wherein the right eye of the viewer will be exposed to the red and blue components of the right image, but to the green component of the left image. Similarly the left eye of the viewer will be exposed to the red and blue components of the left image, but to the green component of the right image.

Since, for proper stereoscopic viewing, it is absolutely necessary that each eye of the viewer be exposed to all the color components of its corresponding image, and only to those color components, the result of the proposed modification would render the system of the primary reference inoperable for its intended purpose, namely for stereoscopic display.

It is clear, therefore, that the combination of the two references as proposed by the Examiner would not meet the requirements for “obviousness” under 35 U.S.C. §103(a), as set forth in the above quotation, since such a combination of references would render the primary reference inoperable to perform its intended function.

In preparing this response, it was noted that original Fig. 12 contained an error with respect to the outputs of projectors 1 and 2, respectively. This error, as shown in red ink in the attached photocopy of Fig. 12, has been corrected in the newly submitted sheet of drawings containing Fig. 12.

In view of the foregoing, it is believed that this application is now in condition for allowance, and an early Notice of Allowance is respectfully requested.

Respectfully submitted,



Martin D. Moynihan
Registration No. 40,338

Date: June 17, 2008

Enclosures:

- Request for Continued Examination (RCE);
- Petition for Extension of Time (1 Month);
- Signed Declaration of Yitzhak WEISSMAN;
- Yitzhak WEISSMAN's CV;
- Letter To Chief Draftsman;
- 1 Sheet of Annotated Marked-Up Drawing;
- Formal Drawing Transmittal Sheet; and
- 16 Sheets of Replacement Drawings

Amendment to the Drawings:

Subject to the approval of the Examiner, please amend Fig. 12 of the drawings as shown in red ink in the attached photocopy. A corrected sheet containing Fig. 12 is also enclosed.